UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,191	09/26/2003	Jung-bum Suh	1293.1858	5225

21171 7590 11/23/2007

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
PATEL, GAUTAM	
ART UNIT	**PAPER NUMBER**
2627	
MAIL DATE	**DELIVERY MODE**
11/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/670,191	SUH, JUNG-BUM	
	Examiner	Art Unit	
	Gautam R. Patel	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,9,10,16,17 and 19-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,9,10,16,17 and 19-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-2, 9-10, 16-17 and 19-21 are pending for the examination.

RCE STATUS

2. The request filed on 10/31/07 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 9-10, 16-71 and 19-21 are rejected under 35 U.S.C. § 102(e) as being anticipated by Lim et al., US. Patent 6,693,861 (hereafter Lim).

As to claim 1, Lim discloses the invention as claimed [see Figs. 3-7, especially 4], including monitoring the tracking actuator and returning the objective lens, comprising the steps of:

monitoring whether the tracking actuator [fig. 3, unit actuator coil] deviates from a dynamic range based on a signal controlling the feed motor when tracking is performed, wherein the monitoring comprises comparing the signal controlling the feed motor with a predetermined reference value, and determining that the tracking actuator deviates from the dynamic range when the signal controlling the feed motor is greater than the predetermined reference value for a predetermined time; and

returning the objective lens [fig. 2, unit 65] connected to the tracking actuator to a neutral point directly in response to the determining that the tracking actuator deviates from the dynamic range, wherein the predetermined reference value is set based on the dynamic range and a

movable range of the tracking actuator [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

4. The aforementioned claim 2, recites the following steps, inter alia, disclosed in Lim:

the returning of the objective lens is performed by turning off a tracking servo of the disc drive [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

5. The aforementioned claim 6 & 15, recites the following steps, inter alia, disclosed in Lim:

the predetermined reference value is set at a value approaching a limit of the dynamic range of the tracking actuator [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

6. The aforementioned claim 9, recites the following steps, inter alia, disclosed in Lim:

an optical pickup [fig. 3, unit 2] outputting a radio frequency signal from a signal picked up from a disc loaded in the disc drive when the disc drive is driven;

a radio frequency amplifier [fig. 3, unit 3] outputting a tracking error signal detected from the radio frequency signal;

a servo control unit [fig. 16 unit 8B] outputting a control signal for driving the tracking actuator and the feed motor based on the tracking error signal output from the radio frequency amplifier; and

a control unit [fig. 3, units 4 and 9] monitoring the control signal for driving the feed motor output from the servo control unit, wherein the control unit compares the control signal for driving the feed motor with a predetermined reference value, and when the control signal is greater than the predetermined reference value for predetermined time, determines that the tracking actuator deviates from the dynamic range and directly in response to determining that the tracking actuator deviates from a dynamic range, controls the servo control unit to return the objective lens connected to the tracking actuator to a reference position

wherein the predetermined reference value is set based on the dynamic range and a movable range of the tracking actuator [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

7. The aforementioned claim 10, recites the following steps, inter alia, disclosed in Lim:

the control unit controls the servo control unit to turn a tracking servo off to return the objective lens to the reference position, preventing damage [col. 17, lines 3-6] to the tracking actuator and the objective lens when an over-current flows through tracking coils due to the tracking actuator deviating from the dynamic range [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

8. As to claim 16, it is rejected for the similar reasons set forth in the rejection of claim 9, supra.

As to added limitation Lim discloses:

a tracking actuator [unit 3; fig. 3] driver [fig. 3, unit 8] that drives the tracking actuator using the control signal output from the servo control unit to move the objective lens in a tracking or radial direction of the disc [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

NOTE: Here the Applicants are merely claiming how a tracking actuator works.

9. The aforementioned claim 17, recites the following steps, inter alia, disclosed in Lim:

the disc is a compact disc (CD) or a digital versatile disc (DVD) [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

NOTE: optical discs are inherently CD or DVD.

10. The aforementioned claim 18, recites the following steps, inter alia, disclosed in Lim:

a tracking actuator driver that drives the tracking actuator using the control signal output from the servo control unit to move the objective lens in a tracking or radial direction of the disc [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

11. The aforementioned claim 19, recites the following steps, inter alia, disclosed in Lim:

an equalizer [fig. 3, unit 7 & 19] receiving the control signal output from the servo control unit and outputting a low frequency band signal, the low frequency band signal representing an amount of deviation of the objective lens from a neutral point within the dynamic range [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

12. The aforementioned claim 20, recites the following steps, inter alia, disclosed in Lim:

a feed motor driver [fig. 3, unit 110] driving the feed motor to move the tracking actuator using the low frequency band signal output from the equalizer, a moving distance of the feed motor being a distance the tracking actuator is moved to return the objective lens to the neutral point [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

13. The aforementioned claim 21, recites the following steps, inter alia, disclosed in Lim:

predetermined reference value is set at a value corresponding to a maximum limit of the dynamic range of the tracking actuator [col. 3, line 11 to col. 4, line 41 and figs. 3-4 and figs. 3-4].

14. Applicant's arguments with respect to above claims have been considered but are moot in view of the new grounds of rejection.

ALTERNATE REJECTION-1

15. Claims 1-2, 9-10, 16-71 and 19-21 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kitayama et al., US. Patent 7,035,175 (hereafter Kitayama).

Kitayama discloses maximum [reference value] and minimum values of objective lens offset and brings objective lens to neutral position [col. 14, lines 30-41 & col. 15, lines 27-39].

ALTERNATE REJECTION-2

Claim Rejections - 35 U.S.C. § 103

16. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 9-10, 16-71 and 19-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim Korean publication KR20010076557 [IDS].

This ABSTRACT discloses a pulse width modulated sled control based on tracking error signal for a established time. Patent does not talk about bringing objective lens a to a neutral point. However bringing objective lens to neutral point has been known in the art for while . One of ordinary skill in the art would have been able to bring the objective lens to a neutral point.

Other prior art cited

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Morimoto (US. Patent 6,266,301). Details of TES compensation shift signal.
b) Baba (US. patent 5796687)
c) Akiyama (US. patent 7126894).

Contact information

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2600) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, who can be reached on (571) 272-7023.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.

GAUTAM R. PATEL
PRIMARY PATENT EXAMINER

Gautam R. Patel
Primary Examiner
Group Art Unit 2627

November 17, 2007